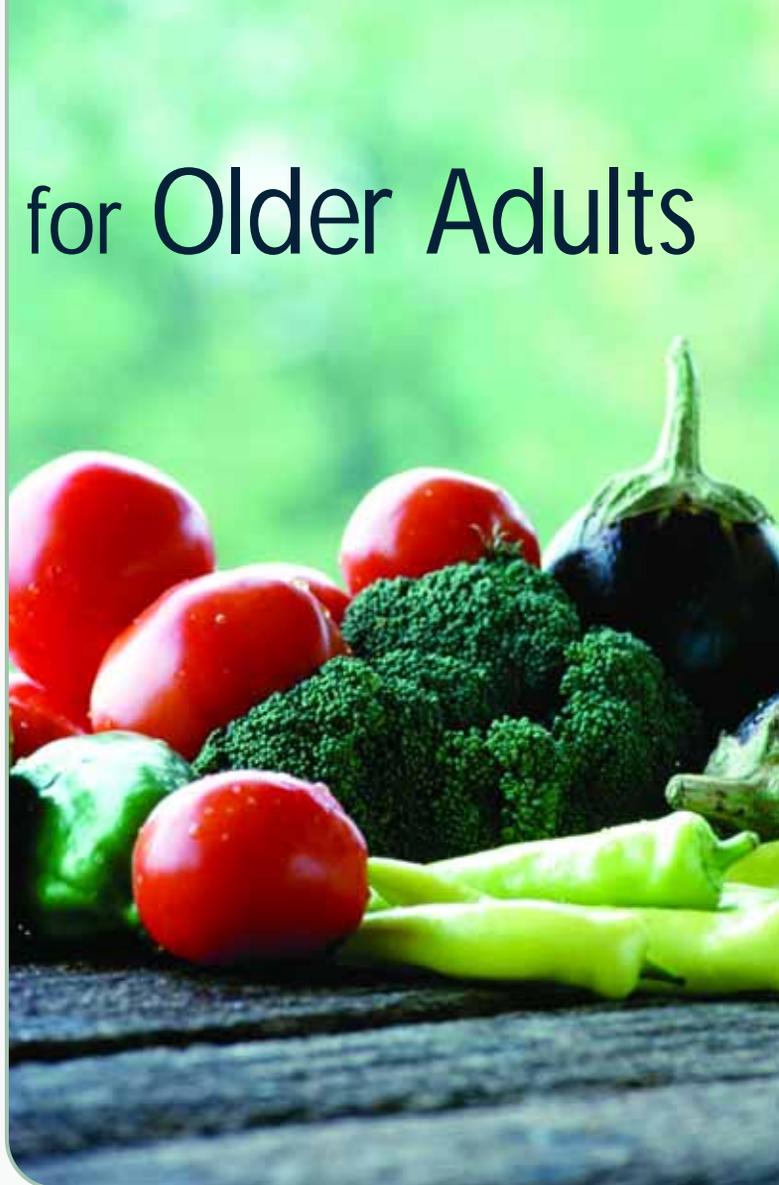


Optimizing Nutrition for Older Adults

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“Nutrition is one of the major determinants of successful aging,” according to the American Dietetic Association (April 2005).

Good nutrition supports health and independence by reducing the risk of chronic disease and slowing disease progression. Older adults who remain well-nourished are less likely to develop infections, have shorter hospital stays, heal faster and experience fewer complications than those who are poorly nourished. Unfortunately, a significant portion of adults 65 and older have suboptimal diets, lacking in key nutrients. A first step toward optimizing nutrition health in this population is to understand the changing dietary needs of older adults and the specific challenges that often prevent them from meeting those needs.

Selected Vitamin and Mineral Needs That Change With Age

	Vit D (IU)	Vit B6 (mg/d)	Calcium (mg/d)	Sodium (g/d)	Chloride (g/d)
Females					
31-50 yrs	200	1.3	1000	1.5	2.3
51-70 yrs	400	1.5	1200	1.3	2.0
> 70 yrs	600	1.5	1200	1.2	1.8
Males					
31-50 yrs	200	1.3	1000	1.5	2.3
51-70 yrs	400	1.7	1200	1.3	2.0
> 70 yrs	600	1.7	1200	1.2	1.8

Nutrition Goals for Older Adults

Like everyone else, older adults should make every effort to eat a healthful diet and, when it is advisable, to follow the Dietary Guidelines for Americans. Although recommending general nutrient goals for older adults is difficult—because many require specialized diets—for most seniors the Food Guide Pyramid (www.mypyramid.gov) is a useful starting point. What follows is a summary of the Dietary Guidelines for Americans with key recommendations for older adults.¹

Key Recommendations:²

Calories From Nutrient Groups

- Eat a variety of nutrient-dense foods and beverages within and among the basic food groups while choosing foods that limit the intake of saturated and trans fats, cholesterol, added sugars, salt and alcohol.
- Meet recommended intakes within energy needs by adopting a balanced eating pattern, such as the USDA Food Guide Pyramid.
- People over age 50: Consume vitamin B12 in its crystalline (i.e., fortified foods or supplements).
- Older adults: Consume extra vitamin D from vitamin D-fortified foods and/or supplements.

¹ Used with permission from Florida International University, Miami's National Resource Center on Nutrition, Physical Activity and Aging.

² See Dietary Guidelines for Americans 2005, Key Recommendations for the General Population, <http://www.health.gov/dietaryguidelines/dga2005/recommendations.htm>.

Weight Management

- To maintain body weight in a healthy range, balance calories from foods and beverages with calories expended.
- Those who need to lose weight: Aim for a slow, steady weight loss by decreasing calorie intake while maintaining an adequate nutrient intake and increasing physical activity. Consult a healthcare provider about weight loss strategies to ensure appropriate management of other health conditions.

Physical Activity

- Older adults: Participate in regular physical activity to reduce functional declines associated with aging and to achieve the other benefits of physical activity identified for all adults. May need to consult with a healthcare provider before participating in these levels of activity.
- To reduce the risk of chronic disease in adulthood: Engage in at least 30 minutes of moderate-intensity physical activity, above usual activity, at work or home on most days of the week.
- To help manage body weight: Engage in approximately 60 minutes of moderate-to-vigorous-intensity activity on most days of the week while not exceeding caloric intake requirements.

Food Groups

- Consume a sufficient amount and variety of fruits and vegetables while staying within energy needs.
- Consume 3 or more ounce-equivalents of whole-grain products per day, with the rest of the recommended grains coming from enriched or whole-grain products.
- Consume 3 cups per day of fat-free or low-fat milk or equivalent milk products.

Fats

- Keep total fat intake between 20 percent to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts and vegetable oils. Consume less than 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol, and keep trans fatty acid consumption as low as possible.

Carbohydrates

- Choose fiber-rich fruits, vegetables and whole grains often.

Sodium and Potassium

- Consume less than 2,300 mg (approximately 1 tsp of salt) of sodium per day.
- Older adults and individuals with hypertension: Aim to consume no more than 1,500 mg of sodium per day, and meet the potassium recommendation (4,700 mg/day) with food (potassium-rich foods, such as fruits and vegetables) unless otherwise directed by your physician.

Food Safety

- Older adults and those who are immunocompromised: Do not eat or drink raw (unpasteurized) milk or any products made from unpasteurized milk, raw or partially cooked eggs or foods containing raw eggs, raw or undercooked meat and poultry, raw or undercooked fish or shellfish, unpasteurized juices, and raw sprouts. Only eat certain deli meats and frankfurters that have been reheated to steaming hot.

When dietary intake is not varied, older adults may benefit from a low dose multivitamin and mineral supplement. While therapeutic doses of certain nutrients are sometimes warranted, seniors with medical conditions should always consult with their doctor and pharmacist before taking any dietary supplements.

Fluid Intake

There is no consensus on exactly how much fluid older adults should consume. However, in general a 150-pound adult requires approximately 2 quarts, or 8 cups, of water per day. This daily amount includes fluid from beverages and certain foods such as soups. Water needs vary widely depending on metabolic state and health condition. For example, those who are very active, live in hot climates, experience gastrointestinal problems (e.g., inflammation, constipation, diarrhea, vomiting), or have fevers will have increased fluid needs. For every degree Fahrenheit above normal, fluid needs increase by about 7 percent or about one-half cup of water. In contrast, those with congestive heart failure, hypertension, kidney or liver failure may have reduced needs for water. If you have a medical condition, it is important to follow your physician's recommendations for fluid intake.

Restrictive Diets

Therapeutic diets are designed to improve health status, but restrictions have the potential to create new problems. Whenever a special diet is being considered, patients ➤

Nutrition Health Checklist

1. I have an ongoing health problem that affects my diet.
2. I have lost my appetite and/or often skip meals.
3. I have a chewing or swallowing problem.
4. I have nausea, diarrhea or constipation.
5. I drink less than 6 cups of liquid a day.
6. I am on a special diet that was ordered by my doctor.
7. I take more than three different medications.
8. I lost weight without trying. Or, I gained too much weight without trying.
9. I am unable to shop, cook or feed myself nutritious meals.
10. I don't have enough money to buy nutritious foods.
11. I eat alone most of the time.

This checklist is intended to raise awareness of potential nutrition concerns among older adults. This is not a clinical diagnostic tool.

and caregivers should ask: Is a restrictive diet necessary? Does the diet offer health benefits that justify its use? Will the senior benefit from this restrictive diet?

Dietary restrictions that are recommended for younger adults are not always beneficial for older adults. Although studies show that dietary excesses and inactivity results in obesity and impairment of everyday functioning, being overweight is not associated with decreased life expectancy for seniors age 75 and up. For this reason, the American Diabetes Association suggests that a sensible approach to helping seniors achieve nutrition goals may be to make medication changes, rather than enforce food restrictions such as "no concentrated sweets."

In another example, researchers concluded that elevated cholesterol levels for heart disease may not be critical among the elderly. Therefore, nutrition experts explain that "the appropriateness of low-cholesterol diet prescriptions for older adults in long-term care facilities is questionable... Although practitioners should be cognizant of cardiac problems, malnutrition is a more serious threat for most older adults than elevated cholesterol."³ In some cases, a practitioner may suggest a more liberalized diet to improve intake, rather than enforcing strict diets.

In general, it is important to be open-minded when assessing risks versus the benefits of therapeutic diets. An unacceptable or unpalatable diet will not improve food and fluid intake and may worsen undernutrition and poor health outcomes. Qualified professionals can help you to determine the need for nutrition therapy based on each person's individual medical condition, desires and rights.

Obstacles to Adequate Nutrition for Older Adults

Paradoxically, during a stage of life when certain nutrient needs increase, food and fluid intake often decreases. Why? One reason is that older adults experience changes in physiological functions, such as muscle mass, metabolic rate, gastric activity, sensory perception, fluid and electrolyte regulation, frequency of illness and other social determinants that often lead to poor nutrition status. Sometimes medications that are intended to help can harm nutrition status. Vitamin B12, for example, maintains healthy nerves and blood but is particularly sensitive to the effects of age and medication use. (See <http://www.nlm.nih.gov/medlineplus> or <http://www.pdrhealth.com> for a comprehensive list of drug-nutrient interactions.)

Inadequate fluid intake is another common problem among seniors. Reasons for this problem may include difficulty preparing or eating foods, changes in the social environment, medication effects, mobility problems and cognitive changes, among other causes. In addition, seniors often have a reduced thirst sensation that interferes with their ability to meet daily fluid intake goals. Understanding how changes associated with aging affect food and fluid intake can help partners, caregivers and practitioners recognize the unique needs of older adults and develop strategies for achieving individualized nutrition goals.

Troubleshooting and Caregiver Support

Often, the burden of achieving the dietary goals of older adults falls squarely on the shoulders of family caregivers. They may receive little guidance or support as they plan and prepare meals, shop, assist with meals and, when needed, administer tube- or intravenous-nutrition feedings. In a medical setting, trained volunteers can take up some or all of these tasks. Whether the senior is hospitalized or in a home setting, caregivers are encouraged to advocate for their loved ones and not be afraid to ask for help with nutrition concerns.

How can family members and caregivers assist elders in improving nutrition health? A first step is to understand the types of meals that are consumed and how symptoms are related to timing of meals and medications. Seniors and their caregivers may find it useful to record their observations in a log, review them over time, and make dietary adjustments as needed (e.g., coordinating pain medicine on a schedule that reduces discomfort during mealtimes).

To improve intake, involve seniors in decisions about their eating schedule, food choices and dining locations, and create senior-centered meals. Sometimes, it is necessary to

³ American Dietetic Association, Dec. 2005.

make arrangements for informal caregivers or volunteer services to help arrange meals, create a pleasant eating experience and coach or assist with eating and drinking beverages. One study found that seniors who were given friendly verbal prompts to encourage fluid intake several times a day were more successful at meeting daily fluid intake goals. Offering between-meal frozen juices, slushes, etc., is useful during sick days. Of course, providing seniors with culturally appropriate or preferred nutritious beverages and foods improves intake as well. Adding more spices, stronger odors and flavor enhancements to foods may be helpful for those with sensory impairment.

Modifying food texture and consistency can help older adults with chewing and swallowing problems, and should be done under professional guidance. If nutrition health is at risk (see the Nutrition Health Checklist), speak with your primary care physician about the need for a registered dietitian, social worker, speech therapist or other types of professional support.

Resources and Programs

Planning an appetizing and nutritious meal that meets the complex needs of older adults is not an easy task. A list of educational resources is provided to assist readers with meeting nutrition goals and promoting well-being and independence for seniors.

Links to Nutrition Health

- Dietary Guidelines for Americans, 2005 Edition: <http://www.health.gov/dietaryguidelines>
- Drug Nutrient Interactions (MedlinePlus & the Physician Desk Reference): <http://www.pdrhealth.com> or <http://www.nlm.nih.gov/medlineplus>
- Electronic menu planner: <http://hp2010.nhlbihin.net/menuplanner/menu.cgi>
- Modified Food Pyramid for Older Adults (Tufts): <http://nutrition.tufts.edu/consumer/pyramid.html>

Nutrition, Aging and Assistance

- <http://nutritionandaging.fiu.edu>
- The American Dietetic Association or to find a registered dietician in your area: <http://www.eatright.org> or 800-877-1600
- USDA: MyPyramid personal nutrition tracker: <http://www.mypyramid.gov>

Nutrition Assistance Programs

- Community-based services can be located through the Eldercare Locator: www.eldercare.gov
Toll-free: 800-677-1116 9:00 a.m. to 8:00 p.m. (ET)

Examples of Medications That May Reduce Vitamin B12 Absorption

- Acid- and H2-reducing agents (omeprazole: Prilosec®, Losec®; lansoprazole: Prevacid®; rabeprazole: Aciphex®; pantoprazole: Protonix®, Pantoloc®; esomeprazole: Nexium®, Tagamet®)
- Allopurinols (Aloprim®, Zyloprim®)
- Antibiotics (neomycin; aminosalicic acid: Paser®)
- Anticonvulsants (primidone: Mysoline®)
- Antiepileptics (phenytoin: Phenytek®, Dilantin®)
- Barbiturates (phenobarbital: Luminal®)
- Biguanides (metformin: Glucophage®), antiretrovirals (zidovudine: AZT, Combivir®, Retrovir®)
- Nitrous oxide anesthesia
- Resins (colestipol: Colestid®; cholestyramine: Questran®)

Monday–Friday. TDD/TTY Service: Access your relay service or dial “711” for your operator. Instruct the operator to connect you to Eldercare Locator: 800-677-1116

- Meals on Wheels Association of America (MOWAA) provides home-delivered meals services to older adults, homebound, and at-risk individuals. For help, or to give a gift, go to: <http://www.mowaa.org> 703-548-5558
- The National Family Caregiver Support Program: <http://www.aoa.gov/prof/aoaprogram/caregiver/carefam/carefam.asp>. Click: “Help! Where to Find It”
- The U.S. Department of Agriculture (USDA) Nutrition Assistance Programs: <http://www.fns.usda.gov/fns> and <http://nutritionandaging.fiu.edu>

References

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2. ADA. Position Paper of the American Dietetic Association: Nutrition Across the Spectrum of Aging. *J Am Diet Assn*. Apr 2005;105:616-633.
3. *Dietary Guidelines for Americans 2005*, Key Recommendations for the General Population: <http://www.health.gov/dietaryguidelines/dga2005/recommendations.htm>.
4. National Resource Center on Nutrition, Physical Activity & Aging | Florida International University: <http://nutritionandaging.fiu.edu>.
5. Niedert, Kathleen, and Dorner, Becky, eds. *Nutrition Care for the Older Adult: A Handbook for Dietetics Professionals Working Throughout the Continuum of Care*. Chicago: American Dietetic Association, 2004.

Editor's note: The information provided in this article outlines general principles of healthy nutrition for the purpose of education only and is not intended to be used as a substitute for medical advice. Always consult with your physician, or a credentialed nutrition expert, before initiating a specialized diet or using dietary supplements.